

Title (en)

Methods and computer system for analysis, synthesis and quantization of speech

Title (de)

Verfahren und Computersystem zur Analyse, Synthese und Quantisierung von Sprache

Title (fr)

Procédés et système informatique pour l'analyse, la synthèse et la quantisation de la parole.

Publication

EP 1313091 A2 20030521 (EN)

Application

EP 02258005 A 20021120

Priority

US 98880901 A 20011120

Abstract (en)

An improved speech model and methods for estimating the model parameters, synthesizing speech from the parameters, and quantizing the parameters are disclosed. The improved speech model allows a time and frequency dependent mixture of quasi-periodic, noise-like, and pulse-like signals. For pulsed parameter estimation, an error criterion with reduced sensitivity to time shifts is used to reduce computation and improve performance. Pulsed parameter estimation performance is further improved using the estimated voiced strength parameter to reduce the weighting of frequency bands which are strongly voiced when estimating the pulsed parameters. The voiced, unvoiced, and pulsed strength parameters are quantized using a weighted vector quantization method using a novel error criterion for obtaining high quality quantization. The fundamental frequency and pulse position parameters are efficiently quantized based on the quantized strength parameters. These methods are useful for high quality speech coding and reproduction at various bit rates for applications such as satellite voice communication. <IMAGE>

IPC 1-7

G10L 19/14; **G10L 19/08**

IPC 8 full level

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CPC (source: EP US)

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